

### 3.3.6 Oak Savanna Group

The term *savanna* has never been well defined. Cole (1960) summed up the situation this way: "Perhaps of all types of vegetation the savanna is the most difficult to define, the least understood, and the one whose distribution and origin is the most subject to controversy." Today there is still no widely accepted, clear-cut definition of what is meant by savanna.

Most of the information in Section 3.3.6 is reproduced or adapted from "Wisconsin's Biodiversity as a Management Issue" (Addis et al. 1995).

In the Midwest, savanna is generally used to describe an ecosystem that was historically part of a larger complex bordered by the prairies of the west and the deciduous forests of the east. This complex was a mosaic of plant community types that represented a continuum from prairie to forest. Savannas were the communities in the middle of this continuum. The mosaic was maintained by frequent fires and possibly by large ungulates such as elk. Oaks were the dominant trees, hence the term *oak savanna*.

Because savannas grade into both prairie and forest, there are no clear dividing lines between savanna and these two communities. In classifying the plant communities of Wisconsin, Curtis (1959) was forced to set limits for what he called savanna. He ultimately defined it as having no less than one tree per acre and no more than a 50% tree canopy. However, Curtis made it clear that these limits were arbitrary and chosen purely for convenience.

The more wooded part of the historical prairie-forest complex (i.e., savanna or woodlands with 50% - 100% tree canopy) is known to us only through the early accounts of explorers and settlers. This community was already so distorted by lack of fire and other disturbances by the mid-1900s that it was not even classified and studied as a separate community by Curtis and his students. What remained of this community at the time of the Curtis studies (i.e., grown-in savannas) was lumped with the dry or dry-mesic southern hardwood forest communities based on the residual oak trees, often independent of the actual soil moisture regimes of the sites. Recent research is now starting to shed some light on this plant community. Pruksa (1994) studied the sorting out of groundlayer plant species along the natural sunlight gradients found in savanna and woodland.

This more heavily wooded portion of the prairie-forest complex (up to and including 100% closed canopy) might best be described as an open oak woodland. Although much work needs to be done in describing and understanding this community, it should most likely be viewed as separate from oak forest.

In the early to mid-19th century, the oak savanna as an ecosystem was thoroughly fragmented and nearly totally destroyed throughout its range. Most of its acreage suffered one of the following fates: (1) clearing and plowing, (2) overgrazing, or (3) invasion by dense shrub and tree growth due to lack of fire, lack of grazing, or both. Oak savanna now shares equal billing with tallgrass prairie as the most threatened plant community in the Midwest and among the most threatened in the world. Intact examples of oak savanna vegetation are now so rare that less than 500 acres are listed in the Natural Heritage Inventory as having a plant assemblage similar to the original oak savanna. This is less than 0.01% of the original 5.5 million acres.

During the development of the Wisconsin Strategy for Wildlife Species of Greatest Conservation Need, the Oak Savanna Group included the following community types:

- Cedar Glade (Section 3.3.6.1, Page 3-640)
- Oak Opening (Section 3.3.6.2, Page 3-647)
- Oak Woodland (Section 3.3.6.3, Page 3-655)

The vertebrate Species of Greatest Conservation Need in each of the oak savanna communities are presented in the following sections, along with information on opportunities, threats, and priority conservation actions.

Summary of Vertebrate Species  
of Greatest Conservation Need  
Associated with Oak Savanna  
Communities

27 Birds

13 Herptiles

8 Mammals

**48 Total Species**